



The Impact of Marketing and Technological Innovation on the Performance of Financial Technology Companies in the United Arab Emirates

Jasem Mohammed Alshemeili¹; [Su'aidi Bin Dato' Safei](#)²

¹PhD student. Institute of Technology Management & Entrepreneurship. (UTeM), Malaysia. E-mail: p081820033@student.utem.edu.my

²Associate Professor. Faculty of Technology Management and Technopreneurship. (UTeM), Malaysia. E-mail: suaidi@utem.edu.my

Information of Article

Article history:

Received: 13 Aug 2024

Accepted: 26 Sep 2024

Available online: 29 Sep 2024

Keywords:

Marketing Innovation,
Technological Innovation,
Financial Technology (Fintech)

ABSTRACT

The global financial market witnesses a tremendous progress of Financial Technology (Fintech). The companies working in this field have made a significant growth in recent years because of technological innovation and the advent of innovated marketing tools. The Fintech companies in UAE were not an exemption from the recent progress in this industry. However, there are limited number of studies that look into the innovativeness of FinTech companies in the UAE. Therefore, the relationship between marketing and technological innovation and the performance of Fintech companies were examined. This study used quantitative methods to test the hypotheses and surveying Fintech companies. Purposive sampling technique was in used in data collection procedure. The study sample includes 277 respondents who represent the IT staff working in Fintech firms. The findings show that marketing innovation, and technological innovation contribute to the growth and profitability of Fintech companies.

1. Introduction

Financial technology is one of the fields that has recently emerged in the finance and banking sectors, and it has become critical for all countries around the world to keep up with this development (Alkhazaleh, 2021). The financial markets and so as the financial companies have been changed dramatically in the last 30 years, owing largely to technological advancement (Scott et al., 2018). The term Financial Technology (Fintech) refers to new technologies that aim to improve and automate the provision and use of financial services. FinTech also defined as the long-established marriage of finance and technology. Fintech is primarily focus on assisting businesses, entrepreneurs, and consumers in managing their financial activities efficiently and enhance financial processes through the use of specialized software and algorithms in smartphones or computers (Budnitz, 2016). As a result, future collaboration between FinTech firms and traditional financial institutions is required to ensure global financial growth (Alblooshi, 2022). Fintech also includes cryptocurrencies such as bitcoin, tokens, Ether, Binance coins, and lots of cryptocurrency technologies. In today's financial market, that segment of Fintech may take the biggest share in this market. The vast majority of money, however, remains in the traditional global banking industry, where multi-trillion-dollar market capitalization dominates the financial market (Zarrouk et al., 2021). While the debate over financial technology as an intruder continues, an unregulated sector (Alkhazaleh, 2021). The recent emergence and rapid growth of new financial services by Fintech firms has compelled banking institutions to pursue operational innovation in order to maintain a sustainable competitive advantage (Nassiry, 2019). Using methods that stimulate innovation, e.g., marketing innovation, technological innovation by Fintech firms is one way to promote growth and profitability. Innovation is an important component of the company's development strategy for entering new markets, increasing current market share, and providing a competitive advantage. In this case, innovations are part of the organization's strategic goals of promoting brand loyalty in a competitive business environment (Shim & Shin, 2016).

The advancement of technology as a result of advances in telecommunications, information technology, and financial practice lead to establish more Fintech firms every year. This technological advancement has prompted financial innovations that have altered a wide range of financial products and services. In addition, technological innovation reduce costs of doing financial transactions as well as reduces financial risks. Today, Fintech firms facing many challenges. One of these challenges is that greater domestic and global competition, continuous development of new technologies, constantly changing customer needs, shorter product life cycles, the emerging service economy and rising costs place organizations under constant pressure to innovate as they meet time, budget, and performance requirements as well as to advance, compete and differentiate themselves successfully in the marketplace (Zarrouk et al., 2021). To that end, many Fintech companies failed in the market or barely survive due to lack of continuous marketing innovation or technological innovation. Thus they customers simply replaced them by better alternatives (Scott et al., 2018). Therefore, the aim of the study is to investigate the developments of Fintech in general and United Arab Emirates in particular, as well as examining the direct effects of marketing innovation and technological innovation on the performance of Fintech firms in UAE. The result of this study should provide an insight on what have been made so far

in terms of the implementation of Fintech in the UAE and the main challenges that hinder the development of Fintech firms in the domestic market. Therefore, the nature of the study involves looking into the developments that have been made so far in terms of the implementation of Fintech in the UAE.

2. The Principles of Fintech

Fintech is the shortcut for financial technologies, fintech defines the digital innovation and modern technology that goals to enhance, develop and automate financial services. Fintech is applied to assist, promote and support firms, business holders, investors and clients to manage their financial activities by using specialized applications and software (Al Hammadi & Nobanee, 2019). Today's technological innovations are increasingly meeting customers' requirements for ease, speed, inclusiveness, and affordability (Abdulkader & Benamraoui, 2020). Fintech has revolutionized traditional financial services and reshaped the financial landscape. The emerging of Fintech companies offer a wide range of financial services (see Figure-1) that were not possible to get at that degree simplicity and timing, including digital payment solutions, money transfers, crowdfunding solutions, innovative lending solutions, in addition to wealth management and insurance (Hendershott et al., 2021).

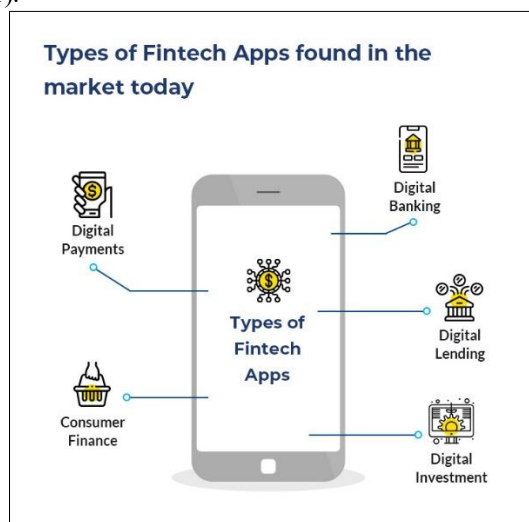


Figure:1 FinTech methods and applications

The rapidly expanding Fintech companies succeed in increasing the demand for innovative digital products at the global and regional levels, and has formed a new phenomenon that has cast a shadow over the future of traditional financial services. Moreover, the recent emergence and rapid growth of Fintech companies have driven banking institutions towards operational innovation in order to gain sustainable competitive advantage (Zhao et al., 2019). For example, the use of blockchain technology has helped in allowing the rapid trading of cryptocurrencies such as Bitcoin among the people (Mention, 2019).

In this regard, Zavolokina et al. (2016) claimed that Fintech has emerged as one of the major factors that have changed the way the modern banking industry operates. Innovative banking services, which increased efficiency and reduced costs, helped these companies and banks to promote the use technology in the financial industry around the world, and raised more than \$250 billion in investments between 2012 and the second quarter of 2018 (David et al., 2019). The spread of smart phones and the adoption of consumer dependence on portable devices, and low cost of smart devices pave the way for the growth and spread of Fintech products and services, especially in the Middle East (Gimpel et al., 2018). Therefore, we can see an increasing number of banks and financial institutions that shift their business towards Fintech and are transform their business models by expanding their investments in this technology and entering into partnerships with international venders in to enhance the digitalization of financial services and improve their competitiveness (Arifianto & Veritia, 2022). But the excessive regulations by authorities that control the business of Fintech may impede the development of financial technology solutions and the growth of these companies in the domestic market (Bussoli et al., 2022). Hence, there is a need to develop comprehensive legislative, regulatory and supervisory frameworks that promote innovation and provide opportunities for the growth of financial technology business models in a competitive environment, in order to ensure that these new technologies are not used as tools for fraud, money laundering and terrorist financing, and to ensure that they do not threaten financial, economic and social stability (Mbugua, 2021). This balanced approach to effective oversight and oversight can expand the reach and reach of financial services, while maintaining consumer protection (Nuyens, 2019).

3. Fintech in United Arab Emirates

The UAE has emerged as a regional hub serving as an incubator of the FinTech in recent years, with regulators beginning to implement policies to encourage the growth of Fintech ventures in 2017 (Zarrouk et al., 2021). The rise of financial technologies has been unstoppable since its inception. Fintech is being adopted in the UAE to match the global trends in this industry. The increasing number of people who want to do fast and mobile financial transactions all over worldwide is the main reason for the large number of Fintech companies in UAE. Hence, Fintech products and services are rapidly expanding in this country. Today, the number of people who use fintech increased by 75% globally between 2015 and 2019, as more people prefer this technology for money transfers and payment services. As more countries adopt Fintech, the Middle East is rapidly increasing its usage of this technology, and the UAE is not an exemption. Therefore, Fintech has grown tremendously in the UAE during the last 20 years, The financial market in UAE is rich with fintech innovations supported by financial free zones, and a private sector eager to partner with innovative fintech startups, all of which have revolutionized the UAE's financial sector, especially Fintech firms (Finextra, 2021). For this reason, the financial authorities in UAE represented by Securities and Commodities Authority (SCA) which is responsible for monitoring and regulating the UAE's financial markets including the Dubai Financial Market (DFM), the Abu Dhabi Securities Exchange (ADX) and the Dubai Gold & Commodities Exchange (DGCX). SCA is eager to promote innovation through the development of a regulatory framework as part of the UAE government's National Strategy for Innovation, which aims to create an environment that encourages innovation (SCA, 2018). As a result, across the Middle East region and Arab world, Fintech in UAE witnessed a fast growth and tremendous expansion in recent year, with the UAE boasting the most dynamic and exciting Fintech firms and promote digital transformation. To that end, the UAE comprises 24% of the Fintech companies in Arab world, followed by Morocco and Egypt with 12% and Tunisia with 10%.

4. The Challenges on Fintech

Fintech as a driver for today's financial market transformations (Babukh et al., 2020). The current business environment is very dynamic, complex, globalized, with uncertainty, which represents a constant challenge for companies. Faced with this, they must adapt and innovate to maintain their competitiveness (Casquín & Cotohuanca, 2022). However, Fintech companies all over the world face lots of challenges that must be identified and managed (Zhao et al., 2019). For banks, fintech is disrupting basic financial services and forcing them to innovate in order to maintain the relevance of the role they play. For consumers, this means potentially greater access to better services. However, the competition from the banks increase the pressure on Fintech to maintain good service and continue in searching for new markets and track the advancements in this technology. Fintech companies are mostly small size firms and not able to compete at the same level with large banks, but they can expand very quickly through riskier customers and business segments than traditional banks. This combination of rapid growth and the increasing prominence of fintech-based services in conducting the financial intermediation business can come with systemic risks. To that end, digital banks are becoming increasingly systemic in their domestic markets. Fintech companies are more exposed to risks than conventional banks, such risks arising from consumer lending, which usually has less protection against losses because their deposits unsecured. In other words, Fintech exposure extends to their tolerance of a higher level of risk in the stock portfolio, in addition to their higher liquidity risks (especially since liquid assets as a proportion of digital deposits are often lower than their ratio with conventional banks). These factors also create a challenge for regulators, e.g., the risk management systems and overall resilience of most digital banks are untested in economic downturns. In contrast, in some markets Fintech increase harden the competition in the financial market, they are also putting pressure on long-standing competitors in this industry. For example, the United States, the competitive pressure from Fintech companies is reducing the profitability of conventional banks, a trend that is expected to continue.

Fintech in the Gulf and Middle East region is undergoing a radical change. Among the Gulf countries, the United Arab Emirates (UAE), Bahrain, and Saudi Arabia have taken the lead in the Fintech transformation. Several government initiatives in these countries have encouraged large private sector investments. At the same time, the region is not immune to a number of challenges and bottlenecks that are impeding the sector's growth. It remains to be seen how these challenges are overcome and Fintech's full potential is realized in the coming years (Banerjee, 2020). The scenario of Fintech in the UAE is not different. This country has emerged as a regional hub serving as an incubator of the Fintech ecosystem in recent years, with regulators beginning to implement policies to encourage the growth of Fintech ventures since 2017. However, detailed empirical evidence on the impact of various Fintech-level and ecosystem-specific factors on Fintech success and survival is still lacking. According to the findings of a study conducted by Zarrouk et al. (2021), the availability of resources, particularly venture capital, is critical to the success and survival of Fintech companies as microbusinesses in UAE. However, financial constraints, the regulatory environment, and legal issues all have a negative impact on the creation and growth of Fintech ventures.

In sum, the Arab world including the UAE should take lead of the available opportunities and face the tough challenges facing the adoption of this technology, particularly the development of modern regulatory legislation that would create a

Fintech business that supports the economy in general and entertain success and profit with minimum risks (Alkhazaleh, 2021).

5. Innovation in Financial Industry

Innovation in the financial industry refers to the process of creating new financial products, services, or processes. These changes can include updated technology, financial instruments, credit and equity generation (Kong & Masud, 2019). Recent financial innovations include hedge funds, private equity, structured retail products, mortgage securities (Beck et al., 2016). Crowdfunding, mobile banking technology, and remittance technology are examples of innovation in the financial industry (Schindler, 2017). There are three classes of financial innovation: institutional, productive, and procedural. Institutional financial innovation is associated with the creation of new types of financial companies, for example specialized credit card companies such as Capital One, electronic trading platforms such as Charles Schwab, and virtual banks (Chen & Yeh, 2022). Productive financial innovation is associated with new products, for example financial derivatives, securitization or securitization, real estate loans in foreign currencies. Procedural financial innovation relates to new ways of conducting financial transactions, including Internet banking and telephone banking (Frame & White, 2004). Financial innovation is considered one of the most important techniques used in the field of finance, in order to meet the desires of different segments of dealers, cover the needs of the financial market, and thus increase the competitiveness of institutions (Kalay & Gary, 2015). Faced with this fact, it has become necessary for banks to search for new innovative financial products so that to survive in the financial market (Gennaioli et al., 2012; Lerner & Tufano, 2011). As Fintech companies are part of the financial industry, there are certain types of innovations that contribute to the growth and profitability of Fintech companies. These innovation types of innovations have been reported to help businesses so as financial institution to expand in the market and attract more customers (Jílková, 2019; Mbugua, 2021).

5.1 Marketing Innovation

Marketing innovation is the introduction of a new marketing approach that makes significant changes to packaging, design, placement, product promotion and pricing strategies (OECD, 2005). Marketing innovation is what leads to significant improvements in certain marketing elements, such as product, price, advertising, distribution and the market (Alblooshi, 2022). As a result, marketing innovations aim to meet the needs of consumers by opening up new markets and changing the company's product positioning in the market to increase sales (Zhao et al., 2019). This can be a product differentiation, a promotion, a distribution. They are considered as changes in the context of market entry of products and services (Casquín & Cotohuanca, 2022). The aim of marketing innovation is to increase sales and market share and to open new markets (Sugiat & Sudiana, 2020). This type of innovations includes finding new market segments for existing products. Some modifications of existing products may be necessary to meet the requirements of a new market. Example: existing fixed and electronic books that have been converted to e-books for mobile users (Dmour et al., 2020). Marketing innovations develop new marketing techniques and methods. The development of new methods, techniques and tools for marketing plays an important role in the success of organizations. An example of marketing innovation is changing techniques for collecting information related to potential customers. Companies now use special software to collect information about their customers to expand in the market. New business formats, such as online stores, are also an example of marketing innovation (Zhao et al., 2019). In sum, marketing innovation is linked to certain practices that lead to expansion in the market such as the introduction of new marketing methods, with significant changes in product development, packaging, advertising, positioning and even pricing (Alblooshi, 2022).

5.2 Technological Innovation

Technological innovation is the use of technology to create new products or services using new technological tools. To establish technological innovation, fundamentally new technologies, as well as a combination of pre-existing technologies or sophisticated knowledge, must be used. Indeed, the adoption of new goods or processes based on technological advances is regarded as critical to an organization's long-term competitiveness and survival (Tajudin & Che, 2018). Globally, there is a growing interest in fostering innovation in business and service sectors (particularly in technology) in order to maintain or expand national economic competitiveness and to address concerns about the impact of economic activity on resource consumption (Nassiry, 2019). To that end, the use of technologically advanced products and procedures has been identified as crucial in developing a successful people-serving service that outperforms its competitors. In this regard, Fintech companies can boost their performance in the market through the availability of external technological information, technological supports, and technological tools, whereas technological inventions help companies to achieve their goal. Furthermore, technical innovation increases the value of Fintech services through creativity and the incorporation of information technology into the work, and this type of innovation allows organizations to gain more knowledge for doing the work in a different way, as technology has changed the way of accomplishing complex tasks because technological instruments are more flexible and ease the work process (Chesbrough & Bogers, 2014).

5.3 The Relationships Between Marketing Innovation and Performance of Fintech Companies

The association between marketing innovation and Fintech has been reported in the literature in various countries, e.g., innovation strategy based on marketing innovation has a significant effect on the competitiveness of Fintech companies in Nairobi, Kenya (Mbugua, 2021). Changing the consumer target to use new products and service requires an appropriate marketing innovation, the survival of Fintech companies is highly depending on marketing innovation (Sugiat & Sudiana, 2020). As marketing innovation approach entails substantial modifications in knowledge as well as innovation which are the sources of revealing new ideas for promoting financial products in the market, the regression results of Mochama (2021) showed that marketing innovations significantly affected the competitive advantage of sampled Fintech firms. This is due to fact the Fintech marketing includes a composing of marketing strategies designed only for fintech firms. These firms are implementing innovative technology to enhance and ultimately automate the use of financial services to consumers. In the same context, Casquín and Cotohuanca (2022) examined the effect of marketing innovation on Fintech companies in Peru, they found that marketing innovation allows a more conclusive explanation of the influence of new ideas in marketing the financial products on the performance of Fintech companies. While the findings of Dmour et al. (2022) revealed that marketing knowledge management had a significant favorable influence on bank performance. Fintech innovation acted as partial mediators in this relationship. In addition, the marketing innovation has been reported to have a significant effect on creating a sustainable competitive advantage for financial institutions in Jordan (Alsamydai et al., 2010). Yet, this relationship has not been reported in the UAE financial market. Therefore, this study will test the following hypothesis.

Hypothesis: 1 “Marketing innovation has a significant effect on the performance of Fintech companies in UAE”

5.4 The Relationships Between Technological Innovation and Performance of Fintech Companies

The advancement in technological innovation result in tremendous development in the financial market. The last two decades have been marked by a strong expansion in the development of technological innovations in all human activities. This phenomenon has strongly impacted the financial sector, which has had to readjust and reinterpret its business operations in an environment that has never been so competitive (Bussoli et al., 2022). Therefore, the technological innovation development strategy and corresponding mechanism process should be established to gradually form a new competitive advantage (Fadhul & Hamdan, 2020). The foundation of FinTech is based on using technological innovation to provide customer with significant financial services and products. To that end, there is a strong link between technological innovation and Fintech performance (Yan et al., 2022). For example, technological progress like blockchain accelerated the flow of capital toward a more sustainable economic technology (Nassiry, 2019). Some authors reported that technological innovation is the greatest measure that can reduce costs significantly in Fintech business (Al Hammadi & Nobanee, 2019).

The innovations in financial technology services dominates the traditional financial services, e.g., Bashayreh and Wadi (2021) claimed that Jordanian banking should integrate technological innovations to boost the widespread application of fintech at a reasonable cost. On the one hand, technological innovations help Fintech firms by acting as an intermediary and make their services more accessible. As FinTech services allow for greater efficiency and cost reduction by replacing human interfere with technological procedures; moreover, technological innovation allow for greater transparency, simplicity, convenience, speed, personalization of services flexibility, and which encourage customer loyalty (Bussoli et al., 2022). Some novel studies on FinTech even predicted that such technological innovations provide new opportunities for Fintech companies to disrupt the market and fundamentally change the business landscape (e.g., Gomber et al., 2017; Ng & Kwok, 2017; Iman, 2018). In other words, the more technological innovation, the better performance in the financial market (Putri, 2019). In the same context, technology innovation moderates the effect of knowledge management infrastructure towards the performance of financial firms in Jordan. Based on these findings, this study will test the following hypothesis in the UAE financial market.

Hypothesis: 2 “Technological innovation has a significant effect on the performance of Fintech companies in UAE”

6. Methodology

This study used quantitative methods to test the hypotheses and assessing the significance of relationships between the technological innovation and marketing innovation towards the performance of FinTech companies in the UAE. Purposive sampling technique was in used in data collection procedure. The study sample includes 277 respondents who represent the IT staff working in Fintech firms. SPSS software was used to conduct data analysis. SEM and regressions applied to identify to identify the strength and significance of relationships.

7. Results and Findings

The first stage in the analysis was the demographic data of respondents. Table 1 reveals that employees having a Bachelor degree are the highest number, and those holding only PHD are the smallest group in Fintech companies. This result indicates that the level of education in Fintech companies is fairly high. Concerning work experience, the result indicates that the employees who have middle occupational experience represent the highest percentage in the organization, whereas fresh employees (1-5 years) are the lowest number of the workforce in Fintech companies. Finally, Fintech who do Payment wallet and financing are the majority in the UAE.

Table:1 Demographic data in Fintech companies

Demographics	Level	Percentage (%)
Gender	Male	76.17
	Female	23.83
Age	20-29 years	32.13
	30-39 years	41.88
	40-49 years	17.69
	50-59 years	6.50
	Older than 60 years	1.81
Academic Qualification	Bachelor	42.60
	Master	36.46
	PHD	20.94
Work Experience in Fintech	1-5 years	28.52
	5-10 years	22.02
	More than 10 years	53.07
Type of service	Payment wallet	25.63
	Cryptocurrencies	11.91
	Automated investment	10.47
	Financing	23.47
	Virtual credit cards	14.80
	Others	13.72

Next, multiple linear regression is used to examine the technological innovation and marketing innovation towards the performance of FinTech companies in the UAE. The evaluation of relationships is made through multiple regression analysis. The resulting data indicated in Table 2 indicates the result of multiple effect of technology and marketing innovation on the performance of Fintech companies.

Table: 2 Regression model summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.682	0.477	0.432	0.45622

a. Predictors: Product innovation, process innovation, marketing innovation, organizational innovation

The initial assessment of the output in the summary Table 1 explains the degree to which as regression model predicts the variability between each independent variable (innovation practices) and the performance of FinTech companies. Whereas $R = 0.682$ indicates a high degree of multiple regression between the independent variables (innovation practices) and the dependent variable (performance of FinTech companies). Moreover, it is found the magnitude of $R^2 = 0.461$. These values show the percentage of the total variation in company performance which can be explained by all innovation practices (i.e. Product innovation, process innovation, marketing innovation, organizational innovation). In other words, the change in innovation practices explains (46.10%) of the change in the performance of FinTech companies. To examine the significance of these relationships, unstandardized coefficients are used to report that direct relationships between each innovation practice are statistically significant ($p\text{-value} \leq 0.05$) as shown in Table 3. In

addition to that, the strength of each relationship in the regression model is examined using Standardized coefficients (Beta).

Table: 3 Summary of multiple linear regressions between the variables

Regression Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.612	0.220		3.151	0.000
Marketing innovation	0.280	0.042	0.360	2.411	0.000
Technological Innovation	0.157	0.061	0.270	4.899	0.000

a. Dependent Variable: Performance of FinTech companies

Reading the output data in Table 2 reveals that all relationships between marketing innovation as well as technological innovation and the performance of FinTech companies is significant ($\text{Sig.} \leq 0.05$), the same While the magnitudes of standardized coefficients reveal a moderate effect for both relationships. The strongest relationship is found between marketing innovation and performance of FinTech companies ($\text{Beta} = 0.360$). In this case, Fintech firms need to focus on adopting more marketing innovation tools to promote their financial products and services, such as social media management, direct mails, and web adds.

The next step in the analysis is to confirm the fit of the framework with the empirical data. SEM was applied to examine the model-fit of the conceptual framework. As shown in Figure 2, the values of fit-indices within the cut-off points. Starting with $\text{PCLOSE} = 0.292$, i.e., non-significant and highly fit the data, while $\text{RMSEA} = 0.053$ (≤ 0.08) which indicates a high degree of model-fit. Moreover, $\text{CMIN/DF} = 1.785$ (≤ 3.00), $\text{CFI} = 0.963$ (≥ 0.80), $\text{TLI} = 0.957$ (≥ 0.80), the result of fit indices matches the typical magnitudes of TLI and CFI, as TLI or CFI greater than 0.9 indicate an accuracy of framework and data.

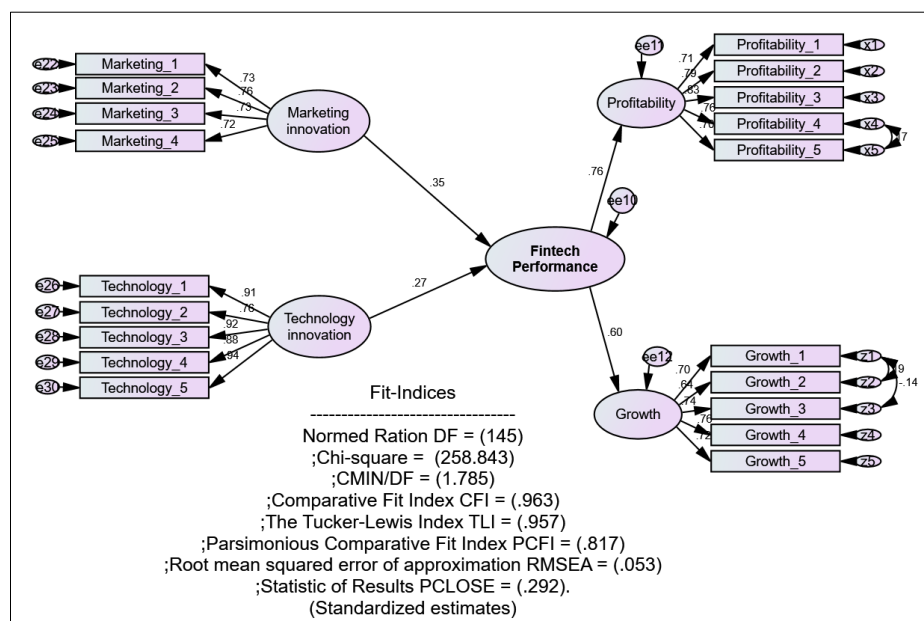


Figure: 2 The structural model of FinTech Innovation practices

In sum, the first hypothesis states that marketing innovation influences the performance of FinTech companies. The empirical results reveal that promoting marketing innovation should boost the performance of Fintech companies in the UAE market. In this regard, Arifianto and Veritia's (2022) approved that innovated marketing tools, such as social media contribute to high sales volume in the financial market because the people visit social media attempted to reveal information about their preferences which can be used to proactively focus on these preferences in the future (Arifianto & Veritia, 2022). The second hypothesis states technological innovation influences the performance of FinTech companies. To support this claim, the analysis demonstrated in Table 2 show a significant relationship between technological innovation and Fintech performance. Actually, innovation in technology has become necessary for Fintech firms to survive in the market. The leveraging innovation in new technologies offers several advantages such as enhanced security, broad business coverage, speed, convenience, and enhanced customer experience (Zhao et al., 2019).

8. Conclusion

The debates in this paper reveal the importance of Fintech for the economies in parallel to the banking industry. The financial technology is a newly established sector that offer the majority of conventional financial services but in timely manner. The companies working in this field have made a significant progress in recent years because of technological innovation. The Fintech companies in UAE were not an exemption from the recent progress in financial technology. However, there are certain challenges face Fintech companies, particularly the development a regulatory legislation that fit the type of work in this market. The policymakers in the country should set feasible guidelines that help Fintech companies to expand and improve their performance in term of profitability and growth in the market. In addition, the review of literature reveal limited number of studies that look into the innovativeness of FinTech companies in the UAE. Therefore, the relationship between marketing and technological innovation and the performance of Fintech companies were examined in this study. The findings show that marketing innovation, and technological innovation contribute to the growth and profitability of Fintech companies. In other words, the performance of UAE Fintech companies could be boosted if these companies focus in innovated marketing tools and follow the trends of this technology by adopting the latest innovated application for their business. In sum, the Fintech industry are more likely to adapt to innovation in the market because technological innovation has made life easier, more convenient, and saves time for people, particularly those with social trends and who are increasingly influenced by social media networks. All of these factors influence the profitability and growth of Fintech companies not only in the UAE but also in other countries in the world.

References

- Abdulkader, A., & Benamraoui, A. (2020). FinTech Innovations: A Review of the Recent Developments and Prospects. *Journal of Technologies*, 12(1), 85-95.
- Al Hammadi, T., & Nobanee, H. (2019). FinTech and Sustainability: A Mini-Review (December 9, 2019). Available at SSRN: <https://ssrn.com/abstract=3500873> or <http://dx.doi.org/10.2139/ssrn.3500873>
- Alblooshi, F.S.A.K. (2022). FinTech in the United Arab Emirates: A General Introduction to the Main Aspects of Financial Technology, Sindakis, S. and Aggarwal, S. (Ed.) *Entrepreneurial Rise in the Middle East and North Africa: The Influence of Quadruple Helix on Technological Innovation (Advanced Strategies in Entrepreneurship, Education and Ecology)*, Emerald Publishing Limited, Bingley, pp. 163-178
- Alkhazaleh, A. M. K. (2021). CHALLENGES AND OPPORTUNITIES FOR FINTECH STARTUPS: SITUATION IN THE ARAB WORLD. *Academy of Accounting and Financial Studies Journal*, 25(3), 1-14.
- Alsamydai, Mahmood & Alnawas, Ibrahim & Yousif, Rodina. (2010). The Impact of Marketing Innovation on Creating a Sustainable Competitive Advantage: The Case of Private Commercial Banks in Jordan. *Asian Journal of Marketing*. 4. 113-130. 10.3923/ajm.2010.113.130.
- Arifianto, C., & Veritia, V. (2022). Social network analysis: a competition in Indonesia's fastest growing fintech. *Journal Management*, 24(1), 73-80.
- Babukh, I., Nikiforov, P., & Kinashchuk, S. (2020). Fintech as a driver for today's financial market transformations: The Ukrainian Context.
- Banerjee, A. (2020). Fintech revolution in the gulf countries and mena region. *Entrepreneurial Finance in Emerging Markets: Exploring Tools, Techniques, and Innovative Technologies*, 335-344.
- Bashayreh, A., & Wadi, R. M. A. (2021). The effect of Fintech on banks' performance: Jordan case. In *The Importance of New Technologies and Entrepreneurship in Business Development: In The Context of Economic Diversity in Developing Countries: The Impact of New Technologies and Entrepreneurship on Business Development* (pp. 812-821). Springer International Publishing.
- Beck, T., Chen, T., Lin, C., & Song, F. M. (2016). Financial innovation: The bright and the dark sides. *Journal of Banking & Finance*, 72, 28-51.
- Budnitz, M. (2016). The Legal Framework of Mobile Payments: Gaps, Ambiguities, and Overlap. PEW Trusts. http://www.pewtrusts.org/-/media/assets/2016/02/legal_framework_of_mobile_payments_white_paper.pdf.
- Bussoli, C., Conte, D., & Barone, M. (2022). Financial effects of fintech merge in the financial sector: evidence from an international sample. *Economic and Social Development: Book of Proceedings*, 346-363.
- Bussoli, C., Conte, D., & Barone, M. (2022). Financial Effects of Fintech Merge In The Financial Sector: Evidence From An International Sample. *Economic and Social Development: Book of Proceedings*, 346-363.
- Casquín Cachy, M. D. F., Cotohuanca Nima, K. P., Gonzales Poma, J. R., & Marcos Ramirez, S. S. (2022). The influence of IT adoption and marketing innovation on business performance moderated by absorptive capacity in fintechs in Peru.
- Chen, T. Y., & Yeh, T. L. (2022). Enhancing value-in-use in the FinTech innovation context. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*.
- Chesbrough, H., & Bogers, M. (2014). Explicating open innovation: Clarifying an emerging paradigm for understanding innovation. In H. Chesbrough, W. Vanhaverbeke, & J. West (Eds.), *New Frontiers in Open Innovation*: 3-28. Oxford: Oxford University Press. Page 17.
- David, De La Fuente, Fernandez-Vazquez, S., Rosillo, R., & Priore, P. (2019). Blockchain in FinTech: A mapping study. *Sustainability*, 11(22), 6366
- Dmour, Hani & Asfour, Futon & Al-Dmour, Rand & Dmour, Ahmad. (2020). The Effect of Marketing Knowledge Management on Bank Jordanian Commercial Banks. *Interdisciplinary Journal of Information*,
- Fadhul, S. king performance. In *European Conference on Innovation and Entrepreneurship* (pp. 911-XVII). Academic Conferences International Limited.
- Frame, W. S., & White, L. J. (2004). Empirical studies of financial innovation: lots of talks, little action. *Journal of economic literature*, 42(10), 116-144.
- Gennaioli, N., Shleifer, A., & Vishny, R. (2012). Neglected risks, financial innovation, and financial fragility. *Journal of Financial Economics*, 104(3), 452-468.
- Gimpel, H., Rau, D., & Roeglinger, M. (2018). Understanding FinTech start-ups – A taxonomy of consumer-oriented service offerings. *Electronic Markets*, 28, 245-264.
- Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of Business Economics*, 87(5).
- Hendershott, T., Zhang, X., Zhao, J. L., & Zheng, Z. (2021). FinTech as a game changer: Overview of research frontiers. *Information Systems Research*, 32(1), 1-17.
- Iman, N. (2018b). Is mobile payment still relevant in the FinTech era? *Electronic Commerce Research and Applications*, 30,72-82.

- Jílková, P. Product management and marketing innovation strategy. (2019). The 13th International Days of Statistics and Economics, Prague, September 5-7, 2019
- Kalay, F., & Gary, L. Y. N. N. (2015). The impact of strategic innovation management practices on firm innovation performance. *Research Journal of Business and Management*, 2(3), 412-429.
- Kong, Y., & Masud, I. (2019). Service innovation, service delivery, and customer satisfaction and loyalty in the banking sector of Ghana. *International Journal of Bank Marketing*.
- Lerner, J., & Tufano, P. (2011). The consequences of financial innovation: a counterfactual research agenda. *Annual Review Financial Economic*, 3(1), 41-85.
- Mbugua, S. (2021). Innovation Strategy and Competitiveness of Fintech Companies in Nairobi, Kenya (Doctoral dissertation, University of Nairobi).
- Mbugua, S. (2021). Innovation Strategy and Competitiveness of Fintech Companies in Nairobi, Kenya (Doctoral dissertation, University of Nairobi).
- Mention, A. (2019). The Future of FinTech. *Journal of Research Technology Management*, 62(4), 59-63.
- Mochama, E. K. (2021). Influence of Innovation Strategies on Competitive Advantage Among Fintech Companies in Kenya (Doctoral dissertation, University of Nairobi).
- Nassiry, D. (2019). The Role of Fintech in Unlocking Green Finance—Policy Insights for Developing Countries; ADBI Working Paper 883; Asian Development Bank Institute: Tokyo, Japan, 2019; pp. 315–336.
- Nassiry, D. (2019). The Role of Fintech in Unlocking Green Finance—Policy Insights for Developing Countries; ADBI Working Paper 883; Asian Development Bank Institute: Tokyo, Japan, 2019; pp. 315–336.
- Ng, A. W., & Kwok, B. K. B. (2017). Emergence of FinTech and cybersecurity in a global financial centre: Strategic approach by a regulator. *Journal of Financial Regulation and Compliance*, 25(4), 422-434.
- Nuyens, H. (2019). How Disruptive Are FinTech and Digital for Banks and Regulators? *Journal of Risk Management in Financial Institutions*, 12(3), 217-222.
- Putri, W. H., Nurwiyanta, N., Sungkono, S., & Wahyuningsih, T. (2019). The emerging fintech and financial slack on corporate financial performance. *Investment Management & Financial Innovations*, 16(2), 348.
- Schindler, J. (2017). FinTech and Financial Innovation: Drivers and Depth, Finance and Economics Discussion Series 2017-081, Board of Governors of the Federal Reserve System, Washington.
- Scott, F., & Larry, W. (2018). Technological Change and Financial Innovation in Banking: Some Implications for FinTech. Prepared for the Oxford Handbook of Banking, 3rd Edition. New York University.
- Shim, Y.; Shin, D.H. (2016). Analyzing China's FinTech industry from the perspective of actor-network theory. *Telecommun. Policy*, 40, 168-181.
- Sugiat, M. A., & Sudiana, K. (2020). Implementation of marketing innovation at PT. Pegadaian in the revolutionary 4.0. In *Understanding Digital Industry* (pp. 168-171). Routledge.
- Tajudin, M., & Che, M. (2018). Issues and Trends in Open Innovation amongst Malaysian Fintech Start-ups. *International Journal of Academic Research in Business and Social Sciences*. 8. 22-24.
- Yan, C., Siddik, A. B., Yong, L., Dong, Q., Zheng, G. W., & Rahman, M. N. (2022). A Two-staged SEM-artificial neural network approach to analyze the impact of FinTech adoption on the sustainability performance of banking firms: the mediating effect of green finance and innovation. *Systems*, 10(5), 148.
- Zarrouk, H., El Ghak, T., & Bakhouch, A. (2021). Exploring economic and technological determinants of FinTech startups' success and growth in the United Arab Emirates. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 50.
- Zarrouk, H., Ghak, T. E., & Bakhouch, A. (2021). Exploring economic and technological determinants of FinTech startups' success and growth in the United Arab Emirates. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 50.
- Zavolokina, L., Dolata, M., & Schwabe, G. (2016). The FinTech phenomenon: antecedents of financial innovation perceived by the popular press. *Financial Innovation*, 2(1), 1-16.
- Zhao, Qun, Pei-Hsuan Tsai, and Jin-Long Wang. (2019). Improving Financial Service Innovation Strategies for Enhancing China's Banking Industry Competitive Advantage during the Fintech Revolution: A Hybrid MCDM Model. *Sustainability* 11, no. 5: 1419